

Claims

1. A composition based on zirconium oxide,
5 characterized in that it further comprises at least one additive selected from the oxides of praseodymium, lanthanum and neodymium, and in that it has a specific surface area of at least 29 m²/g after calcination for 10 hours at 1000°C.

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2. The composition as claimed in claim 1, characterized in that it has a specific surface area of at least 35 m²/g, more particularly of at least 40 m²/g, after calcination for 10 hours at 1000°C.

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3. The composition as claimed in either of claims 1 and 2, characterized in that it has a specific surface area of at least 50 m²/g after calcination for 10 hours at 1000°C.

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4. The composition as claimed in one of the preceding claims, characterized in that it has a specific surface area of at least 10 m²/g after calcination for 4 hours at 1100°C.

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5. The composition as claimed in one of the preceding claims, characterized in that it has a specific surface area of at least 15 m²/g after calcination for 4 hours at 1100°C.

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6. The composition as claimed in one of the preceding claims, characterized in that it has a specific surface area of at least 2 m²/g, more particularly of at least 3 m²/g, after calcination for 10 hours at 1200°C.

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7. The composition as claimed in one of the preceding claims, characterized in that it has a specific surface area of at least 45 m²/g after calcination for 4 hours at 900°C.

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8. The composition as claimed in one of the preceding claims, characterized in that it has a specific surface area of at least 50 m²/g, preferably of at least 55 m²/g, after calcination for 4 hours at 900°C.

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9. The composition as claimed in one of the preceding claims, characterized in that the additive content does not exceed 50% by weight of additive oxide with respect to the weight of the composition.

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10. The composition as claimed in claim 8, characterized in that the additive content is between 10% and 40%.

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11. The composition as claimed in claim 9, characterized in that the additive content is between 10% and 30%.

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12. The composition as claimed in one of the preceding claims, characterized in that it has mesopores between 10 nm and 500 nm in size.

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13. The composition as claimed in one of the preceding claims, characterized in that it further comprises aluminum oxide or silica.

14. A method for preparing a composition as claimed in one of the preceding claims, characterized in that it comprises the following steps:

- (a) a mixture is formed comprising compounds of zirconium, of additive and, if applicable, of aluminum or silicon;
- (b) said mixture is contacted with a basic compound
5 whereby a precipitate is obtained;
- (c) said precipitate is heated in liquid medium;
- (d) a compound is added to the precipitate obtained in
10 the preceding step, selected from anionic surfactants, nonionic surfactants, polyethyleneglycols, carboxylic acids and salts thereof, and surfactants of the carboxymethylated fatty alcohol ethoxylate type;
- (e) the precipitate thereby obtained is calcined.

15. The method as claimed in the preceding claim,
15 characterized in that compounds selected from nitrates, acetates and chlorides are used as compounds of zirconium, of additive and of aluminum.

20. The method as claimed in either of claims 14 and 15, characterized in that the heating of the precipitate of step (c) is carried out at a temperature of at least 100°C.

25. A catalytic system, characterized in that it comprises a composition as claimed in one of claims 1 to 13.

30. The catalytic system as claimed in claim 17, characterized in that it comprises a transition metal, particularly a precious metal, supported by the composition.

35. A method for treating exhaust gases of internal combustion engines, characterized in that a catalytic system as claimed in either of claims 17 and 18, or a

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composition as claimed in one of claims 1 to 13, is used as the catalyst.